

AMENDMENTS TO THE CLAIMS

Please replace all prior versions of the claims of invention with the following claims:

1. (Currently Amended) An electrical connector that detachably connects a cable having a metal sheath enclosing a first conductor, to a second conductor, comprising:

a first elongated, tubular, metal housing section having a longitudinal portion extending from a first end to a second end with a diameter at the first end that is sized to closely receive and prepared to be metallurgically joined to the sheath of the cable carrying the first conductor;

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a second elongated, tubular, metal housing section having a first end which is sized to mate with the second end of the first housing section, the second end of the first housing section and the first end of the second housing section having abutting surfaces that are prepared to be mechanically or metallurgically joined, and said second housing section having a second end that is formed to be detachably connected to a mating second electrical connector; and

an elongated, electrically conductive pin, supported by the second housing section, having a first end designed to electrically connect with the first conductor and a second end that is formed to electrically interface with a ~~complimentary~~ complementary electrically conductive pin on a second electrical connector that is electrically connected to the second conductor.

2. (Original) The electrical connector of Claim 1 wherein the first end of the first housing section is constructed to be brazed to the sheath of the cable.

3. (Original) The electrical connector of Claim 1 wherein a mating lap joint is formed between the second end of the first housing section and the first end of the second housing section.

4. (Original) The electrical connector of Claim 3 wherein the mating lap joint is constructed to be brazed.

13/ 5. (Original) The electrical connector of Claim 1 where in the connection between the first housing section and the second housing section is a threaded joint.

6. (Original) The electrical connector of Claim 1 wherein the first electrical conductor comprises two electrical leads that are insulated from one another and the electrically conductive pin comprises two parallel, elongated terminals with the first end of each terminal is constructed to connect a corresponding one of said electrical leads and the second end of each terminal is constructed to mate with a corresponding terminal on the second electrical connector.

7. (Original) The electrical connector of Claim 1 wherein an opening in the sheath of the cable through which the first conductor extends is filled with epoxy.

8. (Original) The electrical connector of Claim 1 including an electrical insulator spacer positioned between the sheath and the elongated, electrically conductive pin.

9. (Original) The electrical connector of Claim 8 wherein the electrical insulator includes a passage through which the first conductor can be threaded.

10. (Original) The electrical connector of Claim 9 wherein the electrical insulator is a ceramic plate.

11. (Original) The electrical connector of Claim 1 wherein the electrically conductive pin is supported by the second end of the second housing section.

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12. (Original) The electrical connector of Claim 1 wherein the first end of the electrically conductive pin is a crimp bucket.

13. (Currently amended.) A method of detachably connecting a first electrical cable having a metal sheath enclosing a first conductor to a second electrical cable for use in a hostile environment comprising:

providing a first elongated, tubular, metal housing section having a longitudinal portion with a diameter at a first end that is sized to closely receive and prepared to be metallurgically joined to the sheath of the first cable carrying the first conductor;

threading the first cable through the first end of the first elongated, tubular housing section;

brazing the sheath of the first cable to the first end of the first elongated, tubular metal housing section;

providing a second elongated, tubular, metal housing section having a first end which is sized to mate with the second end of the first housing section, the second end of the first housing section and the first end of the second housing section having abutting surfaces that are prepared to be

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mechanically or metallurgical joined, and said second housing section having a second end that is formed to be detachably connected to a mating second electrical connector, said second housing section supporting an elongated, electrical conductive pin having a first end designed to electrically connect with the first conductor and a second end that is formed to electrically interface with a ~~complimentary~~ complementary electrical conductive pin on a second electrical connector that is electrically connected to the second conductor;

connecting the first electrical conductor to the first end of the electrically conductive pin; and

joining the second end of the first housing section to the first end of the second housing section.

14. (Original) The method of Claim 13 including the step of epoxying an end of the sheath of the first cable through which the first conductor extends towards the first end of the electrically conductive pin.

15. (Original) The method of claim 13 including the step of inserting an electrical insulator between the metal sheath of the first cable and the first end of the electrically conductive pin.

AMENDMENTS TO THE DRAWINGS

Please replace the current Drawing 1/1 with the attached amended Drawing 1/1, which includes the changes to Figure 1 proposed in the Reply submitted April 16, 2003.

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